

Appl. No. 10/687,671  
 Amtdt. dated March 07, 2007  
 Reply to Office action of December 07, 2006

### Amendments to the Specification

Please amend the paragraphs in the specification as follows:

5  
 7  
 【 Paragraph on page 1, line <sup>5</sup>7】

- 5 The present application is related to the co-pending application entitled  
 “Demodulation apparatus for a network transceiver and method thereof”, ~~Ser. No.~~  
~~UNKNOWN~~ Application No. 10/687,771, filed on the same day as the present application  
 and assigned to the same assignee, the contents of which are herein incorporated by  
 reference.

S.N.  
 6/20/2007

- 10 【 Paragraph on page 3, <sup>line 11</sup>lines 13, 15 and 20】

- To achieve the objects, a transceiver of a communication system is disclosed. The  
 transceiver comprises a front-end receiver for receiving a receiving signal and converting  
the receiving signal to a first signal with a pre-cursor component and a post-cursor  
 component, a noise canceller coupled to the front-end receiver [[10]] for generating a  
 15 second signal through eliminating the noise of the first signal, a Feed-Forward Equalizer  
 (FFE) coupled to the noise canceller for generating a third signal through eliminating the  
 pre-cursor component in the second signal according to a transfer function including a  
 plurality of adjustable constants, wherein the adjustable constants ~~includes~~ include a  
 main-tap and the value of the main-tap is predetermined, and a decoding system coupled  
 20 to the FFE for decoding the third signal and eliminating the post-cursor component in the  
 third signal.

S.N.  
 6/20/2007

<sup>page 4, line 16</sup>  
 【 Paragraph on ~~pages 4 and 5, lines 18 and 20 of page 4~~】

- FIG. 2 shows a preferred embodiment of a receiver for a network transceiver  
 according to the present invention. In FIG. 2, the receiver includes a front-end receiver  
 25 10, a feed-forward equalizer (FFE) 20, a noise canceller 30, a timing recovery (TR) 40  
 and a decoding system 50. The front-end receiver 10 is for receiving a signal and  
 converting the signal to a first signal in digital form with a pre-cursor component and a

S.N.  
 6/20/2007

Appl. No. 10/687,671  
 Amdt. dated March 07, 2007  
 Reply to Office action of December 07, 2006

post-cursor component. The noise canceller 30 is coupled to the front-end receiver 10 for eliminating the noise of the first signal and thus generating a second signal. The FFE 20 is coupled to the noise canceller 30 for eliminating the pre-cursor component in the second signal and thus generating a third signal. The decoding system 50 is coupled to  
 5 the FFE 20 for decoding the third signal and eliminating the post-cursor component in the third signal.

line 3  
 [ Paragraph on page 7, line 10 ]

The FFE 20 is coupled to the noise canceller 30 for generating a third signal through eliminating the pre-cursor component of the second signal. The FFE 20 includes an  
 10 adaptive filter 21 and a digital auto-gain controller (DAGC) 22. The adaptive filter 21 is a finite impulse response filter. The circuit diagram of the adaptive filter 21 is shown in FIG. 4. In this embodiment, a transfer function of the adaptive filter 21 is  

$$C_0 Z^3 + C_1 Z^2 + C_2 Z^1 + 1 + C_4 Z^{-1} + C_3 Z^{-2} + C_6 Z^{-3}$$
, where  $C_0$ ,  $C_1$ ,  $C_2$ ,  $C_4$ ,  $C_3$  and  
 $C_6$  are adjustable constants and  $Z$  represents a delay element. The main-tap is  
 15 set to be 1. Through setting the main-tap to be a predetermined value, preferably, 1, the circuit complexity of the FFE 20 can be simplified. In addition, a right-hand tap adjacent to the main-tap  $C_4$  is set to be 0.5 according to the simulation and the practical experiment. The DAGC 22 is coupled to the adaptive filter 21 for adjusting the magnitude of the signal outputted from the adaptive filter 21 to meet the operating range requirement  
 20 of the decoding system 50. The adjustment of the DAGC 22 is based on the constants determined by the adaptive filter 21. Through setting the main-tap to be 1 and the right-hand tap adjacent to the main-tap  $C_4$  to be 0.5, the output signal of the DAGC 22 must do the corresponding adjustment.

S.N.  
 6/20/2007